

CREDIT OPINION

24 September 2019



Contacts

Clifford J Kim +1.212.553.7880

VP-Sr Credit Officer
clifford.kim@moodys.com

A. J. Sabatelle +1.212.553.4136
Associate Managing Director
angelo.sabatelle@moodys.com

Camila Yochikawa +1.212.553.6085 Associate Analyst

camila.yochikawa@moodys.com

Victoria +1.212.553.4490
Shenderovich
Associate Analyst
vika.shenderovich@moodys.com

CLIENT SERVICES

Americas 1-212-553-1653
Asia Pacific 852-3551-3077
Japan 81-3-5408-4100
EMEA 44-20-7772-5454

Seattle (City of) WA Electric Enterprise

Update Following Affirmation of Aa2 and Stable Outlook

Summary

Seattle City Light's (SCL: Aa2/stable) credit profile considers the wealthy and diverse service area covering the City of Seattle (UTGO Aaa/stable) and surrounding communities, SCL's historical willingness to raise rates when necessary, and credit supportive financial policies including the Rate Stabilization Account (RSA). Other credit supportive factors are SCL's ownership of low-cost hydro generation, long-term power supply contract with Bonneville Power Administration (BPA, Aa1/negative), competitive retail rates, and SCL's participation in the City of Seattle's consolidated money pool.

Our credit view also captures challenges for SCL that include declining electric load growth relative to the service area's strong economic growth, managing hydrology risk and accompanying wholesale price exposure, and SCL's moderately increased debt burden that funds its historically large capital improvement plan (CIP). The rating further considers volatile historical financial metrics that have ranged from the 'Baa' to 'Aa' category under Moody's US Public Power with Generation Ownership methodology because of regional hydrology levels and lower than expected demand growth.

For 2018, the utility's financial performance was modestly stronger than the previous year with Moody's adjusted debt service coverage ratio (DSCR) of 1.59x and liquidity of 138 days cash on hand compared to DSCR of 1.58x and liquidity of 130 days cash on hand in 2017. Higher retail revenue because of a rate increase and reduced operating costs contributed to the modestly improved performance.

For 2019, significantly lower wholesale revenue caused by below average hydrology and increased operating costs will likely pressure SCL's DSCR to levels modestly lower than 1.50x and will likely result in a draw on the utility's RSA account per its intended purpose. Starting in 2020 and onward, we incorporate the view that the utility will achieve adjusted financial performance around our expectations of at least 1.50x DSCR and will maintain at least 90 days cash on hand. Our assumption is supported by the planned rate increases under the utility's recently approved strategic plan, the possibility of an additional surcharge in 2020 given the expected draw on the RSA account in 2019, planned cost reductions incorporated in the strategic plan, and the city's growing economy.

Credit strengths

- » Strong and diverse service area anchored by the City of Seattle
- » Demonstrated willingness to set rates including the RSA mechanism
- » Ownership of low cost hydro and contracted power from BPA
- » Competitive retail rates
- » Liquidity support through the City of Seattle's consolidated money pool

Credit challenges

- » Decoupling of retail electricity demand from economic growth
- » Large, ongoing capital spending program
- » Hydrology and wholesale market risk
- » Somewhat low and volatile financial metrics and financial underperformance in recent years

Rating outlook

The stable outlook considers the benefit of the RSA mechanism, our expectation that the utility will maintain well over 90 days cash on hand and adjusted DSCR of at least 1.50x over time and recognizes city council's historic willingness to support credit quality. The stable outlook is also supported by the City of Seattle's strong and growing economy and SCL's participation in the City of Seattle's consolidated money pool.

Factors that could lead to an upgrade

» Internal liquidity comfortably exceeding 150 days cash on hand and adjusted DSCR exceeding 2.0x on a sustained basis.

Factors that could lead to a downgrade

- » Weakening of financial policies including chronic net draws on the RSA account
- » Willingness to increase rates diminishes
- » Inability to sustain at least 90 days cash on hand or Moody's adjusted DSCR of at least 1.5x over time
- » Liquidity support through the City of Seattle's money pool is weakened
- » Severe deterioration of underlying regional economy

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

Key indicators

Exhibit 1

	2014	2015	2016	2017	2018
Total Sales (mWh)	13,423,975	12,706,001	13,224,890	13,103,832	12,403,350
Debt Outstanding (\$'000)	1,903,800	2,070,800	2,118,100	2,345,500	2,491,600
Debt Ratio (%)	59.4	60.1	58.3	58.4	57.2
Adjusted Debt Ratio (%)	N/A	81.1	78.6	76.2	74.1
Total Days Cash on Hand (days)	158	152	104	130	138
Fixed Obligation Charge Coverage (if applicable)(x)	1.63	1.24	1.50	1.58	1.59

Source: Moody's Investors Service and Audited Financial Statements

Profile

Seattle City Light is a department of the City of Seattle, which operates a utility system that primarily generates and delivers electricity to approximately 461,500 customers in the City of Seattle and several surrounding communities under franchise agreements. The City of Seattle is in the western part of Washington State and is a commercial hub for the Pacific Northwest. SCL's service area is comprised of 131 square miles and has a population of approximately 913,000.

Detailed credit considerations

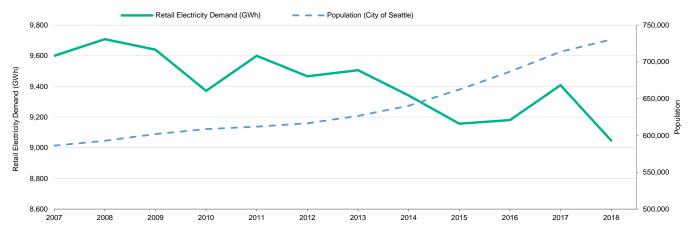
Service Area and System Characteristics

Strong and Diversified Service Area in the Economic Heart of the Region

The utility derives more than 85% of its revenues from the sale of electricity to retail customers in the City of Seattle and surrounding communities, which has 913,000 residents. Service in the surrounding communities is provided under franchise agreements and several are currently under negotiation for extension. SCL's rate process is governed by the city council and is not regulated by the State regulatory board.

The City of Seattle is located in King County, WA (UTGO Aaa/stable), which is the economic heart of the Pacific Northwest region. The City of Seattle's wealth levels are fairly high for a large city, with estimated median family income at 155.8% of the U.S. national average. The major economic activities in the greater Puget Sound region are technology, manufacturing, healthcare, military and education. The strong service area has also outperformed the US average with unemployment around 3.2% as of July 2019. While the economy has been strong and growing, total electric demand has declined from 2008 through 2018 owing in large part to energy efficiency initiatives that ultimately pressures retail revenues (see Exhibit 2).

Exhibit 2
Seattle's Electricity Demand Has Decoupled From Economic and Population Growth

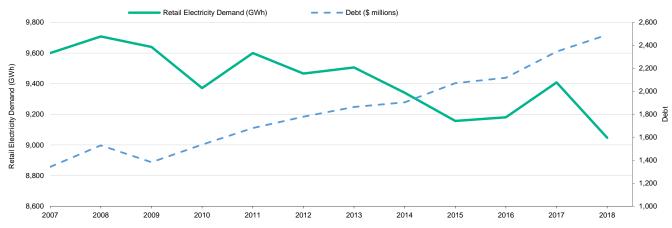


Source: Census Bureau and Moody's Investors Service

The utility's gradually growing debt balance despite SCL's declining retail electricity sales remains an ongoing credit concern. (see Exhibit 3). While electrification of transportation is forecasted to be an important source of new demand over the next ten years, overall demand is expected to decrease over time. These factors highlight the continued importance of the utility's willingness to raise rates to ensure expected financial performance.

Exhibit 3

Debt Has Grown Even as Retail Electricity Sales Have Declined



Source: Moody's Investors Service and Audited Financial Statements

Continued Demonstrated Willingness to Raise Rates Remains a Key Credit Support Anchor

Seattle's city council has shown a demonstrated willingness to use its authority to raise retail rates to support SCL's financial condition and the city's willingness is considered an essential credit support factor to ensure that the utility's financial performance is according to expectations. In 2018, the utility implemented a 5.6% base increase and in January 2019 the utility implemented another 5.8% increase. As part of the utility's recently approved strategic plan, a 5.4% increase is planned for 2020 with additional increases averaging around 4% thereafter. A separate automatic rate adjustment mechanism for any BPA cost increases and the RSA mechanism are also key anchors to the utility's overall credit supportive rate setting approach. Regarding the RSA, a 1.5% automatic surcharge has been in effect since August 2016 as wholesale electricity sales have been below planned levels.

Also, supporting the utility's willingness to raise rates as necessary are SCL's average system rates that are below the main investor owned utility in the area and moderately above the State weighted average. The very strong service area further supports SCL's rate raising ability and willingness.

Hydrology and Market Based Revenues

SCL has historically derived approximately 10-20% of its revenue from non-retail sources such as wholesale revenue that can experience volatility owing to both hydrology and market prices. For example, a severe drop of wholesale revenue resulted in adjusted DSCR dropping to below 1.0 times in 2009.

Since then, SCL has implemented rates increases including a 13.8% base rate increase in 2010 and also implemented the RSA mechanism (see Liquidity section). While the rate increases have contributed to the growth of retail revenue, the volatility of non-retail revenue continues to impact the utility's financial performance. Wholesale sales below expectations in 2019 will likely result in weaker DSCR than recent history and is likely to lead to a draw on the RSA account.

Hydro Dependent Power Supplies

Typically, SCL receives approximately 40% to 45% of its power from owned generation, 30% to 35% from BPA, and the remainder from other sources such as the wholesale market, exchange agreements, and other various long-term contracts. Owned generation totals 1,872 MW of nameplate hydro dams and primarily consists of the 1,022 MW Boundary hydro project (Boundary Project) and the 802 MW Skagit hydro projects (Skagit Projects). The Boundary Project is located in Pend Oreille County in Washington State and its FERC license expires in 2055. The Skagit Projects consist of three hydro projects that operate as one system since they are located on the same ten-mile section of the Skagit River. The Skagit projects' FERC license expires in 2025. SCL also has smaller hydro facilities totaling 48 MW.

SCL also has a long-term contract with BPA that provides firm power (Block) shaped through the year. SCL also has long-term agreements with other hydro projects such as the Priest Rapids project and long-term agreements with wind, landfill and biomass projects that contribute to Washington State's renewable portfolio standards through 2020. Over time, SCL expects to meet increased renewable requirements primarily through the purchase of renewable energy credits (RECs) and the 'no load growth' alternate compliance option. Additionally, the utility's portfolio mix positions SCL to meet the State's new requirement to supply 80% of its retail sources with non-carbon emitting power by 2030 which rises to 100% by 2045.

Large Capital Spending Plan

Until recently, SCL's 6-year forecasted capital program has grown steadily on a rolling basis from \$1.6 billion for the 2010-2015 period to approximately \$2.5 billion for the 2018 to 2023 (see Exhibit 4). Recently, as part of its recently approved strategic plan, the utility reduced its spending with its latest 6 year plan (2019-2024) totaling \$2.3 billion. The reduction reflects a combination of project cancellations and the deferral of noncritical work.

Under SCL's latest capital expending plan, the largest focus of the CIP continues to remain on the distribution system at around \$1.2 billion, which includes electric system related spending tied to the Alaskan Way Viaduct and seawall replacement and more typical expenditures like capacity additions. Forecasted power supply related expenditures total \$420 million and include environmental mitigation and plant improvements.

2.500 2 000 1,500 1.000 500 0 2010-2015 2011-2016 2012-2017 2013-2018 2014-2019 2015-2020 2016-2021 2017-2022 2018-2023 2019-2024 Six Year, Forward Looking Capital Plan

Exhibit 4

Growth to Utility's Rolling 6-Year Capital Program Has Recently Moderated

Source: Official Statements

SCL plans to fund these expenditures approximately 56% with debt, 32% from operations and the remainder from capital contributions. The sizeable program and associated increase in debt remain credit challenges for SCL especially as electricity demand has decoupled from economic growth as previously highlighted in Exhibits 2 & 3.

Debt Service Coverage and Liquidity

Recently Improved Debt Service Coverage Ratios

For 2018, the utility financial performance was modestly stronger than the previous year with Moody's adjusted debt service coverage ratio (DSCR) of 1.59x and liquidity of 138 days cash on hand compared to DSCR of 1.58x and liquidity of 130 days cash on hand in 2017. Higher retail revenue from a rate increase and reduced operating costs contributed to an improvement of the DSCR over the last three years at around 1.50x to 1.59x compared to a recent low of 1.24x in 2015.

For 2019, significantly lower wholesale revenue and increased operating costs will likely pressure SCL's DSCR to modestly lower than 1.50x and may result in a draw on the utility's RSA account per its intended purpose. Starting in 2020 and onward, we incorporate the view that the utility will achieve a DSCR of 1.5x and will maintain at least 90 days cash on hand. Our assumption is supported by the planned rate increases under the utility's recently approved strategic plan, the RSA mechanism that could result in additional surcharge in 2020, the planned cost reductions incorporated in the strategic plan, and the strength of the city's growing economy.

LIQUIDITY

SCL's standalone liquidity consists of unrestricted funds and balances in the RSA account that equaled 138 days cash on hand at year-end 2018, which was modestly stronger than 2017's 130 days cash on hand. Supporting the utility's liquidity is the RSA mechanism that provides a floor to liquidity. The RSA targets \$100 million to \$125 million cash balance and an automatic surcharge is triggered if the cash balance drops below specific thresholds.

The quarterly surcharge is 1.5% if the RSA is at \$90 million or less, 3.0% if the RSA is at \$80 million or less, and 4.5% if the RSA is at \$70 million or less. If the RSA drops to \$50 million or below, the city council must convene a rate review to try to bring the RSA up to \$100 million within 12 months. If the RSA is above \$125 million, excess funds could be used to refund ratepayers or be used for other purposes such as capital expenditures.

Moody's views the RSA as a key risk management tool that supports minimum liquidity and financial metrics. That said, the RSA mechanism itself is insufficient to ensure at least 90 days of liquidity or adjusted DSCR of 1.5x.

An additional source of liquidity is the City of Seattle's consolidated money pool, which totaled \$2.42 billion (\$1.41 billion net of enterprise funds) at July 2019. Seattle's Director of Finance is authorized to make loans to Seattle's various enterprise funds including SCL for up to 90 days. For loans beyond the 90-day period, city council approval is required. Loans bear interest at the cash pool's rate of return. The City of Seattle's willingness to provide liquidity support to SCL via the money pool has been demonstrated on several

occasions, including during the 2001 power crisis when SCL borrowed up to \$107 million from the money pool and again in 2010 when SCL borrowed \$14 million. More recently, the utility intends to borrow \$20 million during the September to October 2019 time frame as temporary funding until the 2019 bonds are issued.

Debt and Legal Covenants

DEBT STRUCTURE

Most of SCL's debts are traditional fixed rate obligations that fully amortize over time. The only exception is around \$200 million variable rate debt that SCL issued in 2018. There is no credit enhancement such as a letter of credit supporting the variable rate debt.

DEBT-RELATED DERIVATIVES

SCL does not have any debt related derivatives.

PENSIONS AND OPEB

SCL participates in the City of Seattle's single-employer defined-benefit public employee retirement plan (SCERS). Moody's calculates the utility's adjusted net pension liability (ANPL) for FY 2018 relating to its proportionate share of SCERS to be around \$701 million, compared to the utility's reported proportionate share of the net pension liability of around \$233 million. Moody's adjusts the reported pension liabilities of entities that report under governmental accounting standards, to enhance comparability across rated issuers. Under governmental pension accounting, liabilities are discounted using an assumed rate of investment return on plan assets. Under our adjustments, we value liabilities using a market based discount rate for high quality taxable bonds, a proxy for the risk of pension benefits.

Management and Governance

Seattle's mayor and city council has ultimate authority over SCL and approves SCL's budget, sets rates, and approves any financing. A separate City Light Review Panel comprised of SCL's customers reviews and assesses SCL's strategic plan, financing policies and rates. SCL's rate process is not regulated by the state regulatory board.

General Fund Transfer

SCL pays a utility tax to the City of Seattle equal to 6% of gross revenues from retail sales, less certain adjustments. The utility tax is subordinate to debt service. SCL also pays a separate state public utility tax equal to 3.8734% of gross revenues from sales within the State, less certain adjustments.

Legal Security

SCL's bonds are secured by a pledge of the net revenues of SCL and covenants require that the City of Seattle set rates to fund debt service, operating costs and other costs to maintain the system. Moody's considers the rate covenant to be weaker than typical for similar issuers. For additional indebtedness, SCL is required to meet a 1.25x DSCR based on net system revenues incorporating draws from and deposits into the RSA. Furthermore, the bonds have a debt service reserve for all parity bonds sized to the lesser of maximum annual debt service or reasonably required reserve or replacement fund per the tax code. The reserve is currently sized to 125% of average annual debt service (excluding variable rate debt). The reserve is currently funded with a \$73 million surety from Assured Guaranty Municipal Corp (insurance strength: A2-stable) and \$128 million of cash. We recognize the current reserve balance is above the minimum due to incremental funding by the utility in anticipation of the surety expiring in August 2029.

Rating methodology and scorecard factors

Moody's evaluates Seattle City Light under the US Public Power Electric Utilities with Generation Ownership Exposure methodology and the scorecard indicated outcome is Aa2, in line with its current Aa2 rating.

The grid is a reference tool that can be used to approximate credit profiles for public power with generation ownership in most cases. However, the grid is a summary that does not include every rating consideration. Please see US Public Power Electric Utilities with Generation Ownership Exposure for more information about the limitations inherent to grids.

Exhibit 5
Scorecard

Factor	Subfactor	Score	Metric
Cost Recovery Framework Within Service Territory		Aaa	
2. Willingness and Ability to Recover Costs with Sound Financial Metrics		Aa	
3. Generation and Power Procurement Risk Exposure		А	
4. Competitiveness	Rate Competitiveness	А	
5. Financial Strength and Liquidity	a) Adjusted days liquidity on hand (3-year avg) (days)	А	124
	b) Debt ratio (3-year avg) (%)	А	76.0%
	c) Adjusted Debt Service Coverage or Fixed Obligation Charge Coverage (3-year avg) (x)	А	1.56x
reliminary Grid Indicated rating from Grid factors 1-5		Aa3	
		Notch	
6. Operational Considerations		0.0	
7. Debt Structure and Reserves		1.0	
8. Revenue Stability and Diversity		0.0	
irid Indicated Rating:		Aa2	

Source: Moody's Investors Service

© 2019 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT-LIKE SECURITIES, AND MOODY'S PUBLICATIONS MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. CREDIT RATINGS AND MOODY'S PUBLICATIONS TO PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS OWN MOODY'S PUBLICATIONS ON THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER. ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing the Moody's publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any rating, agreed to pay to Moody's Investors Service, Inc. for ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$2,700,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJKK or MSFJ (as applicable) for ratings opinions and services rendered by it fees ranging from JPY125,000 to approximately JPY250,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

REPORT NUMBER

1193888

CLIENT SERVICES

 Americas
 1-212-553-1653

 Asia Pacific
 852-3551-3077

 Japan
 81-3-5408-4100

 EMEA
 44-20-7772-5454



24 September 2019